## QUESTIONS AND ANSWERS ABOUT THE ABANDONED MINERAL LANDS PROGRAM

**1. Q. What are abandoned mineral lands?**

A. Abandoned mineral lands (AML0 include all abandoned mines (hardrock, coal, industrial minerals, and sand and gravel), wells (oil, gas, and geothermal), access roads, and associated processing facilities. Mineral lands are considered abandoned when no responsible party can be identified, and responsibility falls on NPS for mitigating safety hazards and remediating environmental impacts.

This handbook addresses abandoned mines and associated facilities while other documents cover abandoned wells.

**2. Q. Why is the AML program important?**

A. There are many safety hazards in abandoned mines including vertical drop-offs, bad air, water, rotten timbers, loose and falling rock, undetonated explosives, and high levels of radioactivity. Decaying structures, attractive to climb, are often unstable. In addition, mine rescues at these sites endanger rescue teams.

Environmental impacts from AML sites vary depending on the type and size of mine and local conditions. The greatest impacts involve surface water and groundwater, soil, vegetation, and aquatic life. In many cases, ecosystems are radically altered or destroyed. Acid mine drainage affects water quality, placer mines destroy riparian habitat, and vehicles crossing the tundra in Alaska damage permafrost. Chemicals leaching out of mine waste rock and chemicals used in ore processing soak into soils and groundwater, damaging soil productivity and water quality.

Part of the NPS mission is preservation of the nation's historic and culturally significant sites. Estimates indicate that approximately two percent of the AML sites are culturally or historically significant. At several parks, the history of early mining is incorporated into interpretive programs. To ensure that historic structures are not lost forever, they must be stabilized before they deteriorate entirely.

Liability of NPS and its employees is one of the major concerns that arises in connection with AML sites. Concern is warranted because many mines present an opportunity for serious injury or death. In addition, mines are man-made. The hazards associated with them are expected to be known, monitored, and actively managed to a much greater extent than natural features.

As land managers and custodians of the public resources, NPS has a responsibility to visitors to enable them to enjoy the parks with a reasonable degree of safety. Likewise, NPS employees should be able to work free of undue risks.

Courts have found that visitors can reasonably be expected to recognize and avoid most obvious hazards. But, when hazardous conditions are unusual or hidden, courts have found that there is a responsibility to provide warnings or take steps to mitigate the hazards.

**3. A. What is the scope and magnitude of the AML problem?**

Q. Current estimates indicate that 120 parks contain approximately 2,000 abandoned mines with nearly 10,000 associated hazards. Further, the inventory of AML sites is incomplete, and there may be many more sites. The following table summarizes the known abandoned mines by region.

AML MINE SITES BY REGION

| | | Affected NPS Units | Mine Sites | Openings & Hazards |
|---|---|---|---|---|
| 1. | Alaska | 11 | 345 | 345 |
| 2. | Mid-Atlantic | 12 | 197 | 1,123 |
| 3. | Midwest | 14 | 86 | 161 |
| 4. | National Capitol | 3 | 8 | 39 |
| 5. | North Atlantic | 3 | 15 | 15 |
| 6. | Pacific Northwest | 7 | 39 | 68 |
| 7. | Rocky Mountain | 20 | 106 | 212 |
| 8. | Southeast | 13 | 164 | 178 |
| 9. | Southwest | 14 | 53 | 122 |
| 10. | Western | 23 | 923 | 7,671 |
| | TOTAL | 120 | 1,936 | 9,934 |

**4. Q. What are the key features of an AML program?**

A. A comprehensive AML program should have the following four main objectives:

* Eliminate health and safety hazards,
* Eliminate or mitigate resource impacts,
* Preserve historically and culturally significant sites, and
* Manage sites for special wildlife habitat.

Achieving these objectives requires the following six basic program components, implemented at the park, region, and Washington office levels:

1. Inventory AML sites,
2. Use inventory data to rank sites,
3. Plan site remediation,
4. Obtain funding,
5. Implement site remediation, and
6. Monitor remediated and remaining sites.

5. Q. **What is the authority for the AML program?**

A. The Organic Act of 1916 - manage the national parks in such a manner and by such means as to leave them unimpaired for the enjoyment of future generations.

Wilderness Act of 1964 - protect and manage so as to preserve the natural conditions of wilderness lands.

The National Environmental Policy Act of 1969 (NEPA) is the basic national charter for protection of the environment.

Endangered Species Act of 1973 (ESA) authorizes the US Fish and Wildlife Service to list a species endangered or threatened which gives these species special protection.

National Historic Preservation Act of 1966 (NHPA) sets forth the concern of the nation for preservation of its heritage.

6. Q. **What are the permitting and compliance requirements?**

A. The remediation project may require permits under the following laws where applicable:

* Clean Water Act, Section 404 permits projects in floodplains and wetlands.
* Clean Air Act, air quality permits for fugitive dust generated by the remediation project.
* State and local permits. Most States have regulatory programs specifically governing mining operations. Many States have air and water pollution control requirements and permits that implement the Federal Clean Air and Clean Water Acts.

When planning a remediation project, consult NPS lead program offices such as the WASO Air Quality Division and Water Resources Division, and the Regional Solicitor's Office when appropriate.

7. Q. **What are the relevant NPS management guidelines?**

A. National Environmental Policy Act Guideline, NPS-12, Release No. 2, September 1982.

Loss Control Management Guideline, NPS-50, "Abandoned Mine Safety", Chapter 30, Release No. 2, January 1991.

Minerals Management Guideline, NPS-66, Chapter 10, (currently in preparation).

Letter from Secretary Manuel Lujan, Jr. dated July 11, 1989 to all employees, "Each agency shall ensure that appropriate financial, personnel and other resources are allocated to effectively implement and administer the agency's safety and health program."

8. Q. **What are the organizational roles and responsibilities?**

A. Mining and Minerals Branch (MMB), Land Resources Division, Washington Office:

* Responsible for coordinating a servicewide AML program.
* Staff includes geologists, mine engineers, environmental specialists, and policy analysts.
* Provide AML technical expertise and policy guidance.
* Provide technical guidance on optimizing AML remediation at minimum cost.
* Assist in obtaining funding.
* Maintain a servicewide AML data base.
* Provide training.
* Design notices for the public.
* Prepare sample fact sheets on AML accidents for use by Public Affairs Officers.

Regional Offices:

* Direct and approve regional AML program.
* Insure compliance with National Environmental Policy Act, Endangered Species Act, and National Historic Preservation Act.
* Cooperate with States on AML projects.
* Resolve conflicts regarding the type or method of mine closures and site remediation.

Parks:

* Conduct AML inventories.
* Implement AML remediation.
* Monitor both remediated and unremediated sites.
* Post warning signs at AML sites, along access routes, and in visitor centers.

For additional guidance on developing an AML program, refer to Tab II.